



GOVERNMENT OF INDIA

MINISTRY OF TRANSPORT AND COMMUNICATIONS

(RAILWAY INSPECTORATE)

RAILWAY ACCIDENTS



REPORT on ACCIDENT

to

309 DOWN BOMBAY-POONA JANATA EXPRESS

between

KHANDALA AND LONAVLA STATIONS

(Central Railway)

on

14th November, 1960

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SUMMARY.

	..	25th November 1961.
Time	23.50 hours.
Railway	Central.
Gauge	Mixed (BG and MG).
Location	.. ..	Between Outer and Home signals of Agra City station (inside a tunnel).
Nature of accident	.. ..	Rear end collision.
Trains involved	.. ..	R.M.R. Down (M.G.) Goods Pilot and No. 4 ATF Down (B.G.) Passenger.
Consisting of	.. ..	R.M.R. Goods Pilot—17 Wagons No. 4 ATF Passenger—8 bogie vehicles.
Estimated speed	.. ..	R.M.R. Goods Pilot—Stationary. No. 4 ATF Passenger— 8 to 10 M.P.H.
System of operation	.. ..	Absolute Block System.
No. of tracks	.. ..	Double Line (3 line Gauntlet tracks).
Gradient	.. ..	1 in 200 falling.
Alignment	.. ..	Left-handed 3° curve.
Weather	.. ..	Dark night.
Visibility	.. ..	Very limited.
Casualties	.. ..	Killed—Nil. Injured : Grievous—Nil. Simple—5.
Cause	.. ..	(a) Failure of Assistant Station Master of Agra City to follow rules of Train Working. (b) Failure of the Driver of R.M.R. Goods Pilot to remind the Station Master about undue detention at the Outer signal. (c) Failure of the Guard of R.M.R. Goods Pilot to protect the train in the rear.
Persons held responsible	.. ..	Assistant Station Master, Agra City Station; Driver of R.M.R. Down Goods Pilot and Guard of R.M.R. Down Goods Pilot.

To

The Secretary to the Government of India,

Ministry of Transport and Communications,

Department of Communications, New Delhi.

(THROUGH the Commissioner of Railway Safety, Simla.)

Sir,

In accordance with Rule 9 of Railway Board's Notification No. 1926—T, dated the 19th March, 1930, I beg to submit my Report on the Rear end Collision of the R.M.R. Goods Pilot and No. 4 ATF Passenger train in the tunnel between Raja-Ki-Mandi and Agra City stations on the Jhansi Division of Central Railway at About midnight of the 25th November, 1961.

2. This accident, from the actual results, was one, in which my Inquiry was not obligatory, but the circumstances were such that it could have been a major disaster. In view of this, I ordered an Inquiry to be held by a Committee of Senior Railway Officers. The Committee, consisting of Sarvashri H. V. Samuel, Divisional Operating Superintendent, C. Krishnamurthy, Divisional Signal and Telecommunication Engineer and O. P. Srivastava, Divisional Mechanical Engineer of Jhansi Division, held the Inquiry on the 28th November, 1961. I myself went to Agra on the 29th November, 1961, inspected the site of the accident, and recalled some of the witnesses further to clarify certain points.

The Committee recorded the evidence of 19 witnesses. I cross-examined 7 witnesses and obtained a report from the Divisional Signal and Telecommunication Engineer, on his inspection of the block instrument and the signalling gear.

3. *Description of accident*—R.M.R. Goods Pilot started from Raja-Ki-Mandi at about 22.00 hours and stopped at the Outer signal of Agra City because it had not been taken off. It was detained there for over 1-3/4 hours. The Home signals of Agra City are suspended from a gantry situated at the Agra City end of the tunnel. Between the Outer and the Home signals of Agra City Station, there is a tunnel, part of which is on a curve and one signal is not visible from the other. No. 4 ATF Passenger also started from Raja-Ki-Mandi station at about 23.45 hours. The Outer signal, referred to above, was lowered by Agra City station. R.M.R. Goods Pilot, which had been waiting for the signal to be taken off, started. The Driver of the Pilot seeing the Home signal for a B.G. train lowered and not for a M.G. train, stopped short of it. No. 4 ATF Passenger, which was following it, collided with its rear end inside the tunnel.

The R.M.R. Goods Pilot was pushed forward and its engine and tender were derailed. The following two vehicles were also derailed. Besides these, the Brakevan, which was the last vehicle, and two adjacent wagons were also derailed. The load of the R.M.R. Goods Pilot parted between the first and second wagons from the Brakevan. The second wagon from the Brakevan telescoped and mounted the third wagon, which was a bogie vehicle. The leading bogie wheels of the engine of No. 4 ATF Passenger train derailed. All other vehicles remained underailed.

4. *Casualties*—I regret to state that as a result of the accident, 5 persons were injured including the Driver of the R.M.R. Goods Pilot, the injuries being of minor nature. The two Firemen of the engine of No. 4 ATF Passenger did not have any injury visible on their person but complained of pain, one in the chest and the other in the back. They were sent by the Assistant Medical Officer of Tundla to the Divisional Hospital of Northern Railway at Allahabad, where, after X-Ray examination, it was determined that they had suffered no fracture of any kind.

5. *Relief Measures*—The Leverman in 'A' Cabin of Agra City station heard the sound of crash in the tunnel and informed the Station Master about it. The latter instructed him to see what had happened. The Leverman went upto the site and thereafter informed the Assistant Station Master that No. 4 ATF Passenger had collided with the rear end of R.M.R. Goods pilot. The Assistant Station Master himself visited the site of the accident and on return to his office, informed the Control about the accident at 00.25 hours. The Breakdown Train from Agra Cantt. was ordered while the Railway Assistant Surgeon, Assistant Engineer and the Area Superintendent of Agra were informed of the accident. The Area Superintendent along with the Assistant Surgeon reached the site of the accident at 1.15 hours. The Doctor attended to the few passengers who were injured and most of them decided to continue their journey.

As both the lines were blocked all the traffic between Agra and Tundla was diverted along the alternate route available, viz., via Agra Fort. The rerailling operations were started at 5.15 hours on 26th November 1961 and completed at 14.00 hours the same day. After rerailling, the vehicles were removed and the track was restored to traffic at 15.00 hours.

6. *Particulars of the trains*—(a) R.M.R. Goods Pilot was a Metre Gauge train consisting of 17 wagons including an open bogie wagon and a Brakevan, which was the last vehicle. It was hauled by engine No. 31019 B (4-6-0). The total length and weight of the train, including the engine, were approximately 438 feet and 286 tons. This train was fully automatic vacuum braked but at the time of the accident, the brakes had been released.

The vehicles and the engine of the train were provided with automatic central buffer couplings.

(b) No. 4 ATF Passenger consisted of 8 bogie vehicles and was hauled by Engine No. 24456/HPS. Its total length was approximately 628 feet and weight 430 tons. It was fully automatic vacuum braked, the brake power being 340 tons.

(c) At the time of the accident, the passenger train was carrying approximately 142 passengers.

7. *Damage*—(a) R.M.R. Goods Pilot—The brakevan of the goods train had its both end couplings headstocks, all axle guards and rear end of the bogie severely damaged. One of its wheels was very badly damaged and had the centre broken. The two covered wagons next to the brakevan had their couplings damaged at both ends while the vacuum cylinder, rear end of the bogie, headstocks and axle guards were damaged. The tender buffer, underframe, inter draw bar and links, frame and buffer beam of the engine were damaged.

(b) No. 4 ATF Passenger—The side buffers of the engine, the buffer beam, and the cattle guard were damaged. The pivot pin of the engine bogie was bent. The right hand side motion guard bracket was bent. The swan neck of the front vacuum pipe was broken. No other vehicle was damaged on this train.

(c) The damage to the permanent way was not much.

(d) The total cost of damage to Railway property was estimated to be as under:—

							Rs.
Locomotives	..	..	..	..	..	..	5,200.00
Rolling stock	..	..	..	..	..	..	7,481.00
Permanent Way	..	..	..	..	..	..	350.00
Total							13,031.00

8. *Local Conditions*—(a) The North-East Main Line of Central Railway in Agra area is worked as Double Line between Agra Cantt. and Bilochpura stations. The various block posts on the Main Line are Agra Cantt., Fatehpur Road Cabin, Raja-ki-Mandi and Bilochpura. Their distances from Agra Cantt. are as under:—

Fatehpur Road Cabin	..	..	..	..	..	1.54 km.
Raja-ki-Mandi	..	..	..	..	..	3.22 km.

Bilochpura is 2.01 km. from Raja-ki-Mandi along the Main Line and Agra City is 3 km. from there along the Branch Line.

Idgah is a station of the Western Railway in Agra area connected to Agra Cantt. by Broad Gauge and to Fatehpur Road Cabin by Metre Gauge track.

(b) From Raja-Ki-Mandi, double line connection takes off to Agra-Tundla Branch. The general direction of tracks in Agra City station yard is from West (Raja-ki-Mandi side) to East (to Tundla Jn.). Trains running from Agra Cantt. to Agra City are Down trains and from Agra City to Agra Cantt. are Up trains. From Agra Cantt. trains go to Tundla both via Raja-Ki-Mandi and via Idgah, the common station on the other side being Yamuna East Bank, which is reached by crossing the Yamuna river over two different Railway Bridges.

(c) The Goods Depot for Agra area is situated at Belanganj on north side of Agra City station, the lines to which place take off from the western end of the station. The Western Railway Metre Gauge System also serves Agra area, the main station of that system is Idgah. Idgah is connected to Belanganj by Metre Gauge track also. Advantage has been taken of the existing Broad Gauge lines and a 3-line gauntlet (combined B.G. and M.G.) track in both Up and Down directions has been provided. The junction point of the Broad Gauge and Metre Gauge tracks is Fatehpur Road Cabin which has already been mentioned above. From this junction point, the gauntlet tracks go past Raja-Ki-Mandi station upto western end of Agra City whence these turn towards north into the Belanganj Goods Yard. Only double line B.G. track diverges to the east to enter Agra City passenger yard.

(d) As already mentioned there is a tunnel (1061 feet long) at the western end of Agra City station between the Down Outer and Home signals. The Down facing points of Agra City yard are situated at the mouth of the tunnel, the lock bar of the points being inside the tunnel and the toe of the switch 13'—6" outside it. The Down Home signal gantry is situated between the face of the tunnel and the toe of the switch. The signal arms are suspended from it for the sake of visibility through the tunnel. At its eastern end, the tunnel is on a curve of 3° which is a left-handed curve for Down trains.

(e) The track from Raja-Ki-Mandi towards Agra City is on a right-handed curve of 3°. Near the end of this curve, there is a road overbridge which crosses the Branch Line between the Down Starter and Up Warner signals of Raja-Ki-Mandi. From there upto the mouth of the tunnel, the track is straight. As already stated, the left-handed curve starts inside the tunnel and continues beyond towards Belanganj. The facing points in the Down Main Line leading into Agra City passenger yard take off from outside of the curve. The other leg of this crossover viz., Points No. 19A joins the Up Main Line where the double line track ends. The single line beyond is on a right-handed curve. The track inside the tunnel is on a falling gradient of 1 in 200 for Down trains.

(f) The track emerges from the tunnel in a deep cutting and Agra City station is located partly on a clearing obtained by cutting away the high ground on the west. The result of the combination of the curve and the high ground on that side is that the Down Home signals cannot be seen from the station office. There is an elevated island platform at Agra City with the station building situated away from the platform with one loop line intervening. Access from the station building to the platform is through a sub-way.

9. *System of train working*—Absolute Block System is followed for train working with Tyer's Double Line Block instruments which are located in the station office at Agra City and are in charge of the Station Master on duty. The Advanced Starter for Up trains is situated short of Points No. 19 viz., after both Up and Down Main Lines converge into one. This signal is controlled by the Double Line Block instrument. There is a Repeater for the Down Outer signal provided in the Station Master's office. This station is interlocked to Standard III. The approach signals for Down trains are worked from 'A' Cabin which is situated at the western end of Agra City station within the fork formed by the lines of Agra City on the south and the lines leading to Belanganj Goods Depot on the north. There are 3 Home signals for Down trains which are numbered 31A, 32A and 33A. Signal No. 31A is for the Broad Gauge trains going to Agra City, 32A is for M.G. Goods trains going to Belanganj and 33A is the Home signal for B.G. Goods trains going to Belanganj.

At Raja-Ki-Mandi the signal cabin is situated in the fork formed by the Up and Down Main Lines on one side and Up and Down Branch Lines on the other side. There are 4 elevated platforms serving each of these lines and the station office is situated on the Up Main Line platform. Raja-Ki-Mandi is interlocked to Standard I. The block instruments are placed in the cabin and are in charge of a switch man.

10. *Weather conditions*—The night was dark and inside the tunnel the darkness was more intense. The atmosphere had been rendered murky on account of the R.M.R. Goods Pilot already standing inside it. On account of the track being on a curve at the western end of the tunnel, the view of obstruction for Driver of No. 4 ATF Passenger was very limited indeed.

II. SUMMARY OF EVIDENCE.

11. *Switchman R. K. Bhatia* was in charge of Raja-Ki-Mandi Cabin on 25th November 1961 from 16.00 hours to 24.00 hours. He stated that the practice that is being followed is that when a Line Clear enquiry is received from Fatehpur Road Cabin, Raja-Ki-Mandi makes similar enquiry from Agra City station if the latter is in a position to receive a Down train. It is only after receiving a reply in the affirmative that Raja-Ki-Mandi gives Line Clear to Fatehpur Road Cabin.

On this date Fatehpur Road Cabin asked for Line Clear from Raja-Ki-Mandi at 20.03 hours. Switchman Bhatia made the usual enquiry from Agra City and on receiving a reply in the affirmative from the latter, he granted Line Clear for R.M.R. Goods Pilot to Fatehpur Road Cabin at 20.14 hours under Private No. 48 but did not immediately obtain Line Clear for the train from Agra City pending receipt of Train Entering Section for the R.M.R. Pilot from Fatehpur Road Cabin. Fatehpur Road Cabin did not despatch the Pilot but cancelled the Line Clear at 20.31 hours, and immediately followed it by asking Line Clear for No. 543 Down Parcel Express going to Delhi. Switchman Bhatia granted Line Clear under Private No. 52. The Parcel Express arrived at Raja-Ki-Mandi at 20.41 hours and he cleared the Section at 20.42 hours. Following the Parcel Express, Fatehpur Road Cabin asked for Line Clear for NAT Down Goods train going to Agra City at 20.42 hours which was granted by switchman Bhatia immediately under Private No. 57. The Train Entering Section signal for NAT Goods was received from Fatehpur Road Cabin at 21.01 hours and Bhatia then obtained Line Clear for that train from Agra City at 21.02 hours under Private No. 65 of Agra City. NAT Goods arrived at Raja-Ki-Mandi at 21.07 hours and left at 21.09 hours. Agra City cleared the section on arrival of NAT Goods at 21.34 hours. After that Fatehpur Road Cabin enquired about Line Clear for R.M.R. Pilot and

Bhatia said that he made a similar enquiry from Agra City and on receiving an assurance from that station, he granted Line Clear for the Pilot to Fatehpur Road Cabin at 21.47 hours under Private No. 13. He received the departure of the Pilot at 21.48 hours from Fatehpur Road Cabin and in his turn obtained Line Clear for that train from Agra City at 21.49 hours which was received under Private No. 16 of Agra City. R.M.R. Pilot was detained by Raja-Ki-Mandi at the Outer signal because it had to cross the Up Main Line over which the Up Grand Trunk Express was to pass. After passage of that train, R.M.R. Pilot was admitted and it came to a stop at the Down Branch Line Starter at 21.56 hours. Switchman Bhatia then lowered the Starter signal. The Pilot started at 21.58 hours and he immediately gave the out report to Agra City, which, according to him, was acknowledged duly. Agra City cleared the Section at 22.25 hours.

Switchman Bhatia stated that at 22.25 hours, Agra City asked for block on the Up Line for performing shunting and this permission was granted by Bhatia under Private No. 36. Agra City cancelled this block for shunting at 23.33 hours under Private No. 16. Bhatia stated that he immediately asked Agra City that Private No. 16 had already been given by him; how was the same Private Number repeated and the Assistant Station Master at Raja-Ki-Mandi replied that it happened to re-appear in the list. Bhatia immediately asked for Line Clear for No. 4 ATF Passenger train and obtained it at 23.33 hours under Private No. 56 of Agra City. No. 4 ATF Passenger arrived at Raja-Ki-Mandi at 23.41 hours and left at 23.45 hours. Bhatia gave the out report to Agra City at 23.45 hours and this was acknowledged. At 23.50 hours Agra City enquired over the telephone about the number of the train that he despatched and when he said that it was No. 4 ATF Agra City stated that it should have been the R.M.R. Pilot. On his reiterating his former reply, Agra City rang off. At about 24.00 hours, the Assistant Station Master of his station came to the Cabin and seized the Trains Register. Bhatia, in his turn, handed over charge to his Reliever.

The Witness stated that he was trained in Railway Training School, Bina, and had learnt train passing duties in May, 1961. He stated that he had been working at Raja-Ki-Mandi for 2-1/2 months and nobody other than the Assistant Station Master, Agra City had talked to him over the block telephone except once when he was suspicious about the person talking, who happened to be the Pointsman. On that occasion he had asked the Pointsman to call his Assistant Station Master on duty.

12. *Shri B. D. Arora was the Assistant Station Master on duty at Agra City on 25th November 1961 from 16.00 hours to 24.00 hours. He stated that about 21.15 hours after arrival of NAT Goods from Raja-Ki-Mandi, he cleared the section. At 22.25 hours he blocked forward on the Up Main Line for performing shunting and cancelled that block at 23.30 hours under Private No. 16. At about 23.31 hours Raja-Ki-Mandi asked for Line Clear for No. 4 ATF Passenger which was granted by him and he informed the Leverman in 'A' Cabin. Leverman in 'A' Cabin, after setting the points correctly for receiving No. 4 ATF Passenger on Line No. 2, asked for release of keys for lowering the Home and Outer signals. Shri Arora released the key at 23.35 hours. At about 23.50 hours Leverman from 'A' Cabin had enquired about the particulars of the train for which Line Clear had been granted and he told him that it was for No. 4 ATF Passenger, on which the Leverman stated that a M.G. Down Goods had arrived at the Home signal. A fireman of No. 4 ATF Passenger informed Arora on phone from 'A' Cabin that a collision had taken place between his train and a Down M.G. Goods train. After locking the Slide and Block instruments, he went to the site of the accident and there he met the Guard of No. 4 ATF Passenger, who told him that there was no serious injury to anyone and that he had rendered First Aid to those who were slightly injured. The witness then returned to the station office along with the Guard of No. 4 ATF Passenger. As he was rendered nervous and as his Reliever had already appeared on duty, he made over charge. The necessary messages about the accident and requisition for relief were sent by his Reliever.*

13. *Guard L. S. Rawtani of R.M.R. Pilot stated that on 25th November 1961, he had been booked to take a Western Railway (B.G.) train from Idgah to Tundla for which he appeared for duty at 11.50 hours. He said that he waited for that train to leave upto 16.00 hours when Guard B. P. Yadav who had to work the R.M.R. Pilot the same evening requested him to exchange duty. Guard Rawtani agreed to the proposal so that Yadav took the train to Tundla at 18.00 hours. R.M.R. Pilot was ready at 19.00 hours but left Idgah at 20.10 hours. According to him, the Pilot left Fatehpur Road Cabin at 21.55 hours after a detention of 1 hour and 35 minutes. The Pilot arrived at Raja-Ki-Mandi at 22.00 hours and started at 22.05 hours on the Starter being lowered. It stopped at the Outer signal of Raja-Ki-Mandi at 22.08 hours and was detained there upto 23.50 hours when it started on the Outer signal being lowered. The Pilot stopped at the Home signal at 23.55 hours. The Driver gave danger whistle on which Rawtani proceeded towards the engine. He had gone past 2 or 3 wagons when he saw that the signal that had been lowered was for a Broad Gauge train and at the same time he also saw the headlight of some train approaching in the rear. He ran towards that train showing red light but the collision took place within 2 or 3 minutes.*

After making various devious statements, he admitted that he did not protect his train in the rear because he had seen that the Starter signal of Raja-Ki-Mandi, which had been lowered for his train, had gone back to danger after his train had passed it and it could not be lowered again without a

fresh Line Clear. To the question why he did not walk back to Raja-Ki-Mandi and report in the Cabin the detention to his train, his excuse was that he was afraid of being left behind. When the rule was pointed out to him that the Driver could not leave him behind, he admitted that he did not carry out his duty but merely relied on the Last Stop signal.

14. *Guard H. B. Gray of No. 4 ATF Passenger* of 25th November, 1961 stated that his train started from Agra Cantt. at 23.30 hours and arrived at Raja-Ki-Mandi at 23.37 hours. At Raja-Ki-Mandi he loaded 10 packages. The train started at 23.42 hours. While approaching the tunnel he saw that the Outer signal of Agra City was lowered. When entering the tunnel the driver of the train had slowed down. At about 23.50 hours his train suddenly stopped. He protected his train in the rear. While going to protect the train in the rear he met two students with bicycle and he requested them to convey the information of the accident to Station Master, Raja-Ki-Mandi. He rendered First Aid to the injured and thereafter went towards the engine. He met the Guard of the Pilot who said that he was not in his brakevan but was showing red signal to the passenger train. There was 18" of vacuum registered in the brakevan.

15. *Driver Bhimchand of R.M.R. Pilot* stated that after he had stopped at Raja-Ki-Mandi for about 5 minutes, the Starter signal was lowered and he started. He stopped again at the Outer signal of Agra City as the signal was 'ON'. He averred that after waiting for about 15 minutes, he sent his Khalasi to the Guard to obtain a memo addressed to Station Master, Agra City. The Fireman took the memo to Agra City station going over the tunnel and returned after about an hour with the self same memo and stated that the Assistant Station Master on duty at Agra City had refused to accept the memo but had asked him (the Fireman) to go back as the signals were being lowered.

On being cross examined, Bhimchand said that the Fireman did not go to the Assistant Station Master on duty but went to Agra City Cabin only where the Fireman had received instructions from the Assistant Station Master to go back to the engine. When the Outer signal was lowered, he started and when he reached the Home signal he found that the signal for a Broad Gauge train had been lowered. He stopped and sounded the whistle, but in the meanwhile the collision took place.

He stated that he was only a Shunter and not a Main Line Driver. He was questioned regarding a few rules and was found to be ignorant of them. According to him the headlight and the cab light of his engine were lit when he arrived at the Home signal of Agra City but as a result of the collision, both the bulbs fused.

16. *Leverman D. S. Subramaniam of 'A' Cabin (Agra City)* was in 16.00 to 24.00 hours shift. He said that at about 23.45 hours the Assistant Station Master on duty informed him that No. 4 ATF Passenger was to be received on Line No. 2. After contacting 'B' Cabin and having obtained necessary concurrence, Subramaniam lowered the signals for receiving the train on Line No. 2. About 10 minutes thereafter he heard a loud report in the tunnel and reported the matter to the Assistant Station Master who directed him to see what the matter was. He handed over charge to his Reliever and went out to see what had happened. Having ascertained that No. 4 ATF Passenger had collided with the rear of the R.M.R. Pilot, he informed the Assistant Station Master accordingly on phone from 'A' Cabin. He said that the Assistant Station Master had not informed him about R.M.R. Pilot. The Fireman of the R.M.R. Pilot never went to him before the collision. He was not at all aware of the R.M.R. Pilot. In the Cabin he could not even hear the sound or see the light of a train standing at the Outer.

After the B.G. Pilot had finished the work and had gone to Belanganj, the Assistant Station Master had inquired from him at about 23.20 hours about the B.G. Pilot and he informed the Assistant Station Master that it had already gone into Belanganj yard. Some time after that (about 5 minutes according to him) the Assistant Station Master informed him that No. 4 ATF Passenger was to be received on Line No. 2 and that the Assistant Station Master had transmitted the key for the relevant signal also.

17. *Driver Barroo of No. 4 ATF Passenger* stated that on 25th November, 1961 he started right time from Agra Cantt. He stopped at Raja-Ki-Mandi as the Starter signal was 'ON'. When the signal was taken off, he started and shut off steam when he passed the Outer signal of Agra City which was 'OFF'. He applied brakes to reduce the speed. While entering the tunnel he further reduced the speed of the train. His Fireman shouted that there was some obstruction ahead and he applied the emergency brake but his engine collided with the Brakevan of the Metre Gauge train. There was no tail lamp on the train nor was there any sidelight. The speed of his train at the time of the collision was about 8 to 10 M.P.H.

III. DISCUSSION.

18. While discussing the evidence the Committee have made out that the R.M.R. Pilot arrived and stopped at Raja-Ki-Mandi station. The period of its stoppage had been shown as 2 minutes by the Switchman, Raja-Ki-Mandi and 5 minutes as recorded by the Guard of the train. That train started with the lowering of the Starter signal of Raja-Ki-Mandi station, which was the authority for its

entry into the Block Section Raja-Ki-Mandi Agra City. The Starter signal of Raja-Ki-Mandi is interlocked with the Block Instrument so that unless Agra City gave permission for a train to approach the corresponding block instrument in Raja-Ki-Mandi Cabin cannot show 'Line Clear' and unless the needle of the instrument in Raja-Ki-Mandi Cabin assumes that aspect, the Starter signal cannot be taken off. Thus they established that the train started from Raja-Ki-Mandi on proper authority at 21.58 hours.

19. From the evidence of H. B. Gray, Guard of No. 4 ATF Passenger, Barroo, Driver of No. 4 ATF Passenger and Bhatia, Switchman, Raja-Ki-Mandi, they have established that No. 4 ATF Passenger came and stopped at Raja-Ki-Mandi while the Starter signal was in the 'ON' position. After the parcels were loaded, the Starter signal of Raja-Ki-Mandi was taken off and as this was the authority for the train to leave, No. 4 ATF Passenger started. This could have happened only if Agra City had given permission for No. 4 ATF Passenger to approach and the Block Instrument at Raja-Ki-Mandi had been changed to 'Line Clear' position.

20. The question, therefore, arises now is: How did both the trains happen to be in the same block section? The Trains Registers of both Raja-Ki-Mandi and Agra City stations have been examined and it is found that whereas in the Raja-Ki-Mandi Register, transactions for the movement of Down train appear, in the Register of Agra City, there is no entry in respect of Down R.M.R. Pilot. Examining the Trains Registers further it is found that at 22.25 hours Agra City blocked forward on the Up Road. As the Up and Down Main Lines terminate just beyond the Home signal of Agra City station and as Line Clear for No. 421 Up diverted load had already been obtained at 22.00 hours, the Down R.M.R. Pilot could not be admitted into Agra City station yard and it naturally stopped at the Outer signal of that station. The diverted load started on the Up Line at 22.00 hours and when it had cleared the block section, Raja-Ki-Mandi closed the block section at 22.25 hours.

21. (a) Shunting was going on in Agra station yard and that had to be continued further. So after No. 421 Up diverted load cleared the section, the Up Main Line was again blocked forward at 22.25 hours and the Down R.M.R. Pilot was detained at the Outer signal. On completion of shunting operations at 23.33 hours, Agra City cancelled the blocking forward and at the same time Raja-Ki-Mandi asked for Line Clear for No. 4 ATF Passenger, which was granted by Agra City at 23.33 hours. Here it may be stated that according to Switchman Bhatia of Raja-Ki-Mandi, it was at that time that the Assistant Station Master of Agra City also closed the section on the Down Main Line, indicating that the R.M.R. Pilot had also cleared the section at 22.25 hours.

(b) From the above facts it is seen that 22.25 hours was the critical time when a number of operations were carried out on the block instruments by Assistant Station Master Agra City, clearing of the block section on the Up Main Line on arrival of No. 420 Up diverted load at Raja-Ki-Mandi and acknowledging the beats, blocking forward of the section along the Up Main Line for shunting work to be carried out in Agra City Yard, and closing of the section along the Down Main Line which had been blocked for R.M.R. Goods Pilot. It is possible that Assistant Station Master Arora of Agra City closed the section along the Down Main Line absentmindedly and did not record in the trains register all the transactions as he should have done. That he committed this mistake of omission is proved from the fact that there is proper record of the transactions in the trains register of Raja-Ki-Mandi. The fact that there is no record thereof in the register of Agra City station is a pointer towards the fact that Assistant Station Master Arora was not working in an efficient manner at the time. The Private Number that has been recorded by Raja-Ki-Mandi while receiving Line Clear for the Down R.M.R. Pilot was correctly in order on the Private Number Sheet of Agra City and there was no means other than the normal method of obtaining it on phone from Assistant Station Master Arora whereby Switchman Bhatia of Raja-Ki-Mandi could get it.

22. (a) Whenever permission is given by any station, besides operating the block instruments, the Assistant Station Master in charge has to confirm the mechanical operation by confirming it with a Private Number from the Private Number sheet, which is kept by him in his personal custody. The Private Number sheets of both these stations were seized and examined and it was found that in the Trains Register at Raja-Ki-Mandi, No. 16 appears against the Private Number given by Agra City both while granting Line Clear for Down R.M.R. Pilot to approach at 21.49 hours as well as while cancelling the blocking forward in the Up Main Line for shunting permission at 23.33 hours. As already stated, in the Train Register of Agra City station, there is no entry in respect of Down R.M.R. Pilot corresponding to the entry of Raja-Ki-Mandi station where it is shown that the blocking forward in the Up Main Line has been cancelled under Private No. 16 at 23.33 hours.

(b) The Private Number sheet of Agra City station shows that No. 16 was given as a Private Number before cancelling the blocking forward. The next number 56 in Private Number sheet correctly appears as Private Number given while granting Line Clear for No. 4 ATF Passenger. Switchman Bhatia of Raja-Ki-Mandi was questioned how he happened to accept the same Private Number when it was repeated both at the time of obtaining Line Clear for Down R.M.R. Pilot as well as at the time of cancelling of blocking forward. Switchman Bhatia stated that he did question Assistant Station Master

Arora about it when the latter told him that this number happened to be repeated in the Private Number sheet. Switchman Bhatia also pointed out that private number did repeat one after the other as it happened on that day when Private Number 21 had appeared in his Private Number sheet for No. 361 Down Passenger at 22.19 hours and No. 701 Down Goods at 22.55 hours. Therefore, so far as Raja-Ki-Mandi station is concerned, this explanation was quite plausible.

(c) Here I must mention that when I called Cabinman Bhatia for questioning, he refused to say anything and referred to his previous statement only. It was only after some time that he agreed to answer some questions. His demeanour gives rise to reasonable suspicion that he never brought to the notice of Assistant Station Master Arora the fact that Private Number 16 had been repeated.

23. The locking of the Block Instrument with the Starter signal shows that the trains were correctly dealt with by Raja-Ki-Mandi Station. Thus it is clear that it was the Assistant Station Master at Agra City Station, who having given the Line Clear for the Down R.M.R. Pilot under Private number 16, failed to record it immediately in the Trains Register and forgot about it. R.M.R. Pilot was detained at the Outer while shunting was being performed in the yard which he was in a hurry to complete before the inquiry was received for the following passenger train viz. No. 4 ATF Passenger. As shunting took long to complete he forgot about the Down R.M.R. Pilot, and after clearing the blocking forward he gave line clear for No. 4 ATF Passenger. Arora took up the plea that the block instrument needle was defective and that the needle of his block instrument did not agree with the needle of the block instrument of Raja-Ki-Mandi Cabin. The block instruments were found to be in proper working condition when they were thoroughly examined by the Divisional Signal and Telecommunication Engineer after the accident. The absence of that entry in the Train Register goes to show that Assistant Station Master Arora of Agra City station was not careful in recording the transactions for the block instruments in his register.

24. *Responsibility of Asstt. Station Master Arora*—(a) The various timings shown in the Registers of the two stations indicate a difference of time of 3 minutes. Even the time of clearing the block section along the Up Main Line on arrival of the diverted load is recorded as 22.24 hours in the Train Register of Raja-Ki-Mandi and as 22.25 hours in the Register of Agra City. The corresponding entries of blocking forward on the Up Main Line appear as 22.25 hours in both registers. This shows that so far as Agra City was concerned, Assistant Station Master Arora performed all the operations on the block instrument in one sweep and then went about writing them down. From these considerations, the Committee have arrived at the conclusion that Shri Arora granted permission for No. 4 ATF Passenger to approach Agra City when the block section was still occupied by the Down R.M.R. Pilot. By doing so, he is responsible for having caused the collision between the two trains. He breached General Rule 248(a). I consider that Shri B. D. Arora was further guilty of not having recorded the transactions over the block instruments as and when he carried them out and thereby he breached the provisions of General Rule 330(b)(i).

(b) Shri Arora admitted that he had had full rest before he came on duty. At that time he had not passed many trains in the Down direction. As a matter of fact the only train in the Down direction was the R.M.R. Pilot which had been waiting at the outer signal for a long time. The shunting was being performed on the Up Main Line which was being carried out by shunting Jamadar Shankarlal and not by Assistant Station Master Arora. Even though there were a number of train movements taking place at about 22.25 hours, they were not too many so that Assistant Station Master Arora could not cope with them. If he had worked strictly according to rules and had noted down the time and private number for each movement, he would not have missed the presence of R.M.R. Pilot in the section. I consider this to be a case of gross carelessness on his part.

(c) Besides the mistakes committed by Shri B. D. Arora of Agra City Station, this accident could have been averted if the Driver and Guard of the Down R.M.R. Pilot had acted in accordance with the rules.

25. *Responsibility of Driver Bhimchand of R.M.R. Pilot*—It was the responsibility of the Driver of R.M.R. Pilot also to send his Fireman to find out the cause why his train was detained at the Outer signal. His statement in this respect was so absurd that it is not worthy of credence. He stated that the Fireman went to Agra City station with a memo. The Assistant Station Master, however, stated that no Fireman approached him. The Fireman contradicted himself several times while giving his statement. He first stated that he went upto the station where the Assistant Station Master refused to see the memo. Then he said that he went only upto Agra City Cabin and had communicated the message to the Leverman. The Leverman stated that he had never seen the Fireman Hashmat Ali until the day when the inquiry was held. The Driver and the Fireman both stated that the latter proceeded from near the Outer signal of Agra City over the tunnel. Having known the area very well, I myself can say that a normal person will never go to the 'A' Cabin of Agra City from the Outer signal by the over-the-tunnel route because the distance is more than double that way and secondly, having reached near the cabin, there is no way to reach it as then one would be in a precipitous cutting about 20 feet high. I do not accept the statements of the Driver and Fireman. It is clear that the Driver never sent his

Fireman to the station, which he should have done when he was detained at the Outer signal. Had he done so, the Assistant Station Master at Agra City station would have been reminded that the Down R.M.R. M.G. Pilot was waiting at the Outer signal and had to go to Belanganj before No. 4 ATF Passenger could be granted Line Clear to approach from Raja-Ki-Mandi station. The action of the Driver is culpable. I consider that he is just a little less responsible for this accident than the Assistant Station Master of Agra City Station. Driver Bhimchand of the Down R.M.R. Pilot is responsible for having breached General Rule 125.

Driver Bhimchand is 30 years of age and has put in 13 years service.

26. *Responsibility of Guard Rawtani*—It was the responsibility of the Guard to have protected his train in the rear when it was detained at the signal. He gave various versions how he had acted but in the end he admitted that he did not protect his train in the rear because he had the assurance of the Last Stop signal which could not be taken off for any train until his train cleared the section. This protection was only partial because in absence of full lock and block, a mistake on the part of the Assistant Station Master in incorrectly clearing the section could have permitted him to give Line Clear for another train to approach. This is exactly what happened in this case. R.M.R. Pilot, however, started from the Outer signal of Agra City station when it was taken off. The outer signal was lowered only after Line Clear had been granted for No. 4 ATF Passenger. This Line Clear would not have been granted if Guard Rawtani had protected his train in rear and in doing so he should have positioned himself very near Raja-Ki-Mandi Cabin. He should not and would not have permitted this block irregularity being committed. By his act of omission, he was accessory to the occurrence of this accident.

Here the question of tail lamp of R.M.R. Down Pilot has to be considered. The Area Superintendent stated that he searched for the tail lamp but neither could it be found nor could its wreckage be found. If it was there, its broken glass lens must have been found but this was not traceable. I am satisfied that no tail lamp was fixed by Guard Rawtani of R.M.R. Pilot and thus contravened the provisions of General Rule 144 and Subsidiary Rule 144(1). He did not protect his train in the rear, which, if he had done, would have prevented this accident. He has disregarded General Rule 125 also.

In this connection it is relevant to mention that while I cross-examined Guard Rawtani, who was a guard of Western Railway, I was informed by him that he had been freely working as Guard of trains going from Idgah to Tundla and from Idgah to Belanganj. On these Sections he had to work in the territory respectively of Northern and Central Railways; yet he stated that he had never been examined nor had he studied the Subsidiary Rules of these Railways for train working.

In fairness to Rawtani it must be pointed out that he had been continuously on duty on 25th November, 1961 from 11-50 hours, until the time of the accident which was about midnight. Even though he did not have much physical labour to perform, the tedium of inaction itself is not only conducive of sloth but it is also a breaker of morale in certain cases. Young Rawtani was a refugee with a large family of dependents which he had to maintain at two places and it is not surprising, therefore, that he was tempted to work over hours, to be able to earn a little more wherewithal to enable him to discharge his worldly obligations.

He is 21 years of age and has put in only 4½ years service as a Guard.

27. *Driver of No. 4 ATF could not avert collision*—No. 4 ATF Passenger had started from Raja-Ki-Mandi and was to stop at Agra City. The Outer signal of Agra City is located at a distance of 1080 feet from the face of the tunnel and the Driver had slowed down his train. The Driver stated that the speed of the train was only 8 to 10 miles per hour when the collision took place. On account of the fact that the Metre Gauge train immediately derailed after the impact and moved forward over the ballast and sleepers the resistance of which is indeterminate, an exact mathematical determination of the speed of No. 4 ATF Down Passenger before the accident is not possible. The fact that even after the collision the damage caused to the M.G. Rolling Stock was not very severe and that the R.M.R. Pilot, which was standing with its brakes off, moved forward only by about 149 feet after the impact, shows that the speed of the train was not much. The witnesses have agreed that the headlight of the passenger train was switched on but the fact of the tunnel being on a curve prevented Driver Barroo from noticing the obstruction in front of him in time to avert a collision.

28. I cannot end the Report without pointing out the most unsatisfactory conditions of train working so far as Agra City station is concerned. Some of them are as follows:—

(a) At this station Double Line working is supposed to commence in the Up direction and end in the Down direction. But unfortunately there are no two Main Lines at Agra City station. The two lines do exist upto the vertical plane in which the Down Home signals are situated. Beyond that point the Double Line disappears and within a short distance from the Home signals, the Single Line commences.

(b) The Up Advanced Starter of Agra City which is controlled by the Double Line Block Instrument is situated along a line which is both Up Main Line as well as the Down Main Line.

(c) When the Home signal at Raja-Ki-Mandi is taken off for a Down Main Line train, it is expected that the track should be clear upto the usual stopping place along the Down Main Line. At Agra City the train is allowed on a line which is not a Down Main Line but as Up and Down Main Line.

(d) The Down Outer signal of Raja-Ki-Mandi is located at a distance of over 1080 feet from the western end of the tunnel whereas the Home signals are placed a couple of feet short of the eastern end of the tunnel. The distance between the two signals is over 2140 feet. One signal cannot be seen from the other and neither of them can be seen by the Station Master, who is supposed to be controlling them. Agra City station is supposed to be interlocked to Standard III and the Up Advanced Starter is controlled by the Block Instrument. Yet the signal is operated by the Leverman situated in the Cabin.

(e) An Advanced Starter must be placed outside all connections on the line to which it applies. In this case, the Up Advanced Starter is situated along the Up Main Line and facing points Nos. 19A and 18A are beyond that signal.

(f) These two Points Nos. 18—19 and 19A, strictly speaking, should be worked as outlying points within a block section. The Point No. 19A is, however, the point which leads upto the commencement of the Down Main Line at Raja-Ki-Mandi. Thus it will be seen that the Down Main Line joins the Up Main Line within the block section. Advanced Starter signal No. 5A has been in existence for several years past. In the wake of these shortcomings, which have been in existence for years past, several other irregularities have followed which need not be mentioned. It will be enough to say that Agra City yard can be held out as an example of how a yard could not be signalled.

(g) Believe it or not, even though Agra City station is a passenger station on the Central Railway this station is not listed either in the Public Time Table or in the Working Time Table of that Railway. Even though Central Railway control phone is provided at Agra City station, no trains, not even the passenger trains, are charted by the Central Railway Controllers. A Branch Line train, as soon as it arrives at Raja-Ki-Mandi, is left at the mercy of the Switchman in charge of Raja-Ki-Mandi Cabin and the Assistant Station Master on duty at Agra City. The extra advantage and Safety gained by the Controller keeping a watch on the progress of a train is lost and detentions upto two hours are not taken much note of as happened in the case of R.M.R. Down Goods Pilot which was detained at the Outer signal of Agra City station. It was argued that all the trains running between Agra Cantt. and Agra City are worked by Northern Railway power and crew. That certainly is not justification for the owning Railway viz., Central Railway, completely to disown Agra City station to the extent of making it unsafe for traffic.

IV. CONCLUSIONS.

29. *Cause of the accident*—Having gone through the proceedings of the Committee and the Remarks and Reasons given by them, I agree with their Conclusions generally, and find that the Collision between R.M.R. Down Goods Pilot and No. 4 ATF Down Passenger between Raja-Ki-Mandi and Agra City stations on 25th November 1961 was caused by allowing No. 4 ATF Down Passenger to enter the Block Section between Raja-Ki-Mandi and Agra City while it was still occupied by R.M.R. Down Metre Gauge Pilot.

30. *Responsibility*—(a) Assistant Station Master B. D. Arora of Agra City station exhibited extreme carelessness after having granted Line Clear for the R.M.R. Down Goods Pilot in having cleared the section before that Pilot had been admitted and had cleared that Block Section. He was further guilty of having granted Line Clear for No. 4 ATF Down Passenger while the Down R.M.R. Goods Pilot was still waiting at the Outer signal. He breached General Rule 248(a) and is primarily responsible.

(b) Driver Bhimchand of Down R.M.R. Metre Gauge Pilot was responsible for inaction in not sending anybody to the station even when he was detained at the Outer signal for over an hour. He breached General Rule 125 and was accessory to the occurrence of this accident. He made his case worse by freely prevaricating in which his Fireman loyally imitated him.

(c) Guard Rawtani of Down R.M.R. Metre Gauge Pilot did not protect his train in the rear and did not fix the tail lamp in the rear end of the brakevan; thereby he breached General Rule 144. Had he done so, this accident would not have occurred. By his inaction he proved himself to be accessory to the occurrence of this accident.

31. I am satisfied that the injured persons, whose number was small and injuries simple, were given adequate attention at the site by the Railway Staff.

Yours faithfully,
K. C. PATHAK

Additional Commissioner of Railway Safety

BOMBAY
The 6th January, 1961.



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